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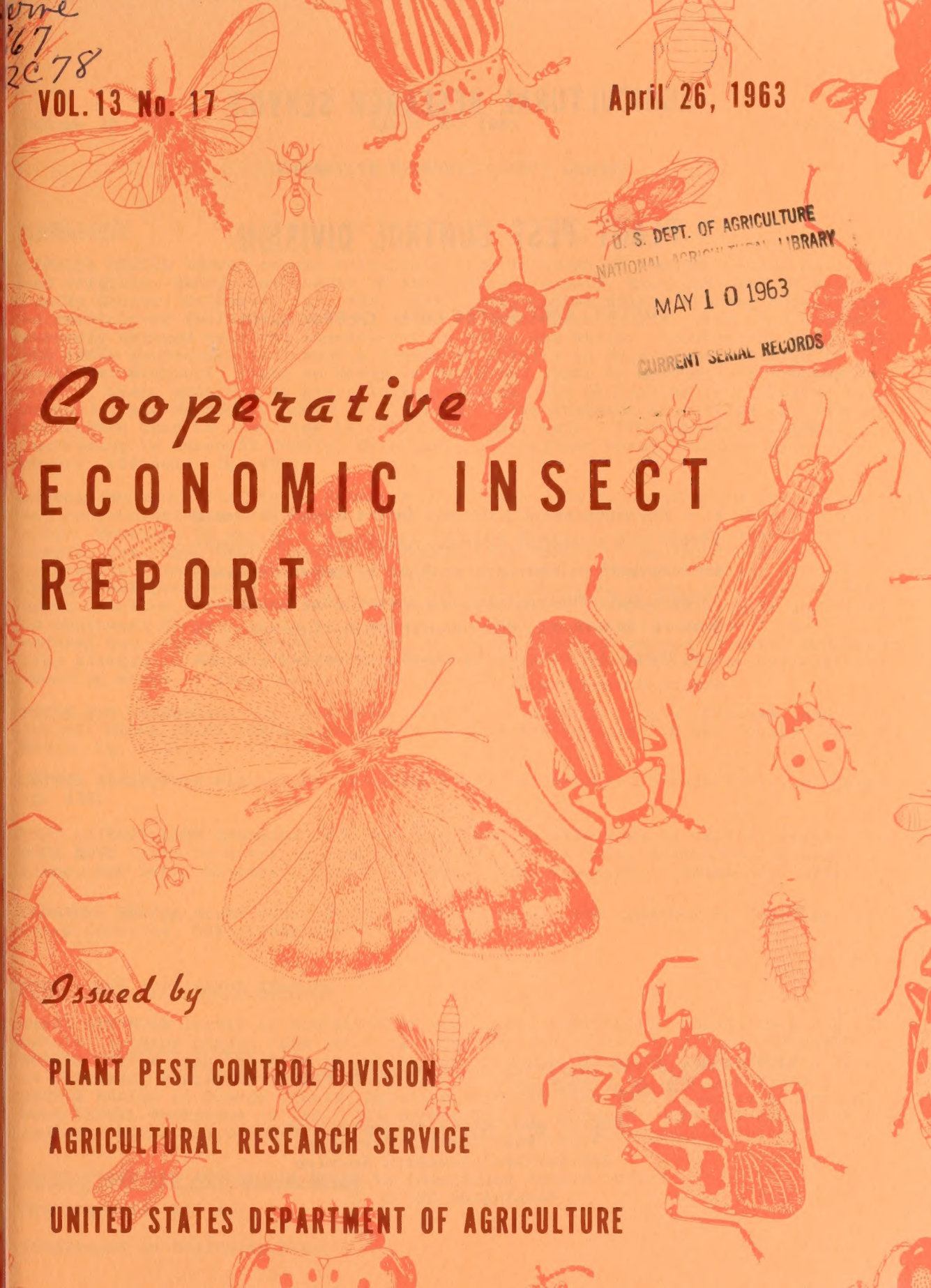
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Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

ALFALFA WEEVIL larval counts relatively high in areas of Alabama, North Carolina and Virginia; damage noticeable in Anne Arundel County, Maryland, and in New Castle County, Delaware. (pp. 425, 442). SWEETCLOVER WEEVIL feeding conspicuous on sweetclover foliage in several areas of Washington County, Utah, and adults severely damaged seedling sweetclover in Darke and Shelby Counties, Ohio. (p.425). PEA APHID increasing and causing damage to alfalfa in several areas. High in southwest Missouri; light to heavy in Oklahoma; light to moderate in Washington County, Utah; moderate to heavy in Eddy County, New Mexico; heavy statewide in Arkansas; and severe in areas of Virginia. Less abundant on alfalfa in eastern Washington than at same time in 1962. (pp. 426, 442). SPOTTED ALFALFA APHID increasing in Marshall County, Oklahoma, and wingless forms found in Mason County, Illinois. (p. 426).

Average percent mortality of EUROPEAN CORN BORER 9.25 in northeast South Dakota, and overwintering mortality 17 percent in Minnesota compared with 16 percent in 1962. Pupation 32 and 20 percent in Kent and Sussex Counties, Delaware, respectively. (pp. 428, 442). Adults of CEREAL LEAF BEETLE being found outside area originally determined as infested in Michigan; egg laying continuing. (p. 428). LEAFHOPPERS previously reported in Oklahoma as damaging to barley in Carter and Bryan Counties determined as SIX-SPOTTED LEAFHOPPER. BROWN WHEAT MITE decreased in southwest Kansas; light to moderate in wheat in central, southwest, west central and panhandle areas of Oklahoma; causing medium damage to wheat and seedling alfalfa in Pahump Valley, Nye County, Nevada; and moderate on dryland fall wheat in areas of Juab County, Utah. (p. 429).

PECAN NUT CASEBEARER controls being applied in Autauga County, Alabama, and largest BLACK PECAN APHID populations in 15 years reported in Lee County, same State. (p. 431).

COTTON FLEAHOPPER migrations to cotton heavy in lower Rio Grande Valley of Texas. (p. 433).

TENT CATERPILLARS damaging live and post oaks in wide area in central Texas, and BUCK MOTH light to heavy on same species of oaks in Hays, Blanco, Gillespie, Llano, San Saba, Lampasas, Burnet and Williamson Counties in Texas. (p. 435).

JAPANESE BEETLE grubs moderate to heavy at airport and cemetery in Cuyahoga and Stark Counties, Ohio, respectively. (p. 440).

SOME FIRST APPEARANCE RECORDS

Small ARMYWORM larvae in southwest Missouri; SIX-SPOTTED LEAFHOPPER in South Dakota; Archips rosana eggs hatching in Willamette Valley of Oregon; COLORADO POTATO BEETLE eggs hatching in Lee County, Alabama; IMPORTED CABBAGEWORM adults in Maryland, Pennsylvania and Ohio; ONION MAGGOT adults in Idaho; ASPARAGUS BEETLE adults in Sussex County, Delaware; TOBACCO FLEA BEETLE adults in Maryland; BOLL WEEVIL emergence in lower Rio Grande Valley of Texas; HORN FLY emergence in Indiana; HOUSE FLY in Ohio; and AMERICAN DOG TICK in Michigan and South Dakota.

CORRECTIONS AND ADDITIONAL NOTES

See pages 441 and 442.

(Continued on following page)

DETECTION

First State records reported were the APHIDS (Myzus sensoriatus and M. ornatus) in Pennsylvania; a GROUND MEALYBUG (Rhizoecus leucosomus) in Florida (p. 436); and a FLOWER FLY (Microdon aurulentus) in Florida (p. 440). New county records were IMPORTED FIRE ANT in Sabine County, Texas, and Jefferson County, Mississippi (p. 441); and a WHITEFLY (Aleurotrachelus jelinekii) in Fresno County, California. (p. 436).

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 437). Populations continue to disperse in ever-widening areas of Texas and New Mexico.

Estimated Losses and Production Costs Attributed to Insects and Related Arthropods in Wyoming in 1962. Alfalfa - p. 444, Alfalfa seed - p. 445, Corn (Grain) p. 446, Corn (Silage) - p. 447, Sugar beets - p. 448, Beans - p. 449, Potatoes p. 450.

Reports in this issue are for week ending April 19 unless otherwise indicated.

NOTE

Volume 12 of "Insects Not Known to Occur in the United States" is now available on request. This is a compilation of the separates, numbers 142-149, appearing in the Cooperative Economic Insect Report, Volume 12, 1962. Also included in this compilation is a consolidated index of the species included in this and previous compilations. PPC Division personnel will receive copies of this compilation through their Regional Offices. Also available, in limited numbers, are Volumes 7, 8, 9, 10 and 11.

WEATHER OF THE WEEK ENDING APRIL 22

At the beginning of the week, three types of weather prevailed over the United States. In the East, the nights were clear and cool; the days, mild and sunny. Strong, gusty winds, reaching 60 m.p.h. locally, dusted some of the middle sections as afternoon temperatures in the Great Plains soared into the 90's in the south and the 70's in the north. In the Far West, Pacific air had spread inland to the Rockies accompanied by showers and thunderstorms with some snow at higher elevations. Tornadoes in the Midwest destroyed several buildings at Manchester, Illinois, tore down some power lines at Kankakee, and smashed a house trailer and tore the tops from trees at Burlington, Iowa. Hail at Milan, Michigan, 2 3/4 inches in diameter, shattered windshields and dented car roofs. By the end of the period, hot, humid weather prevailed over the south-central and southeastern portions of the country, with record-breaking temperatures at a few locations. For instance, the temperature soared to 93° at Springfield, Missouri, on Sunday, the highest ever recorded there so early in the season.

Meanwhile, wintry weather continued over the Far West as snow fell in California as far south as the Los Angeles County Airport, but melted as it fell. Blizzard conditions prevailed at Flagstaff, Arizona, at sunset Wednesday, as temperatures dropped into the middle 20's. Snow fell in the central and northern Rocky Mountains and higher elevations of the Pacific coastal mountains, and also covered

(Continued on page 442)

CEREAL AND FORAGE INSECTS

ALFALFA WEEVIL (Hypera postica) - DELAWARE - Increase in injury noticeable in some untreated New Castle County fields. (Burbutis). MARYLAND - Adults ranged 1-2 per 10 sweeps on alfalfa in Anne Arundel, Calvert and Worcester Counties. Larvae generally light, less than one per sweep, but damage to tops of plants detectable in Anne Arundel County. (U. Md., Ent. Dept.). NORTH CAROLINA - Larvae averaged 15.4 per square-foot pan count in 8 fields in Caswell and Rockingham Counties; high field average 44.8, low field average 1.3. Most larvae second and third stages, with some fourth stage present. Recheck made of 10 fields in Wake and Franklin Counties reported in CEIR 13(16):389; all but 3 just treated. Larvae averaged 17.9 per square-foot pan count in these 3 untreated fields, compared with 8.2 previous week. (Mount). TENNESSEE - Has been found in nearly all alfalfa-growing counties. Although not expected to be particularly damaging in counties newly infested this year, few fields may require treatment. (Mullett). ALABAMA - Larvae averaged 20 per square foot in Morgan, Lee and Autauga Counties. (J. Smith). WYOMING - Adults averaged 2 per square foot in untreated alfalfa and less than one in treated alfalfa in Fremont, Park and Washakie Counties. (Fullerton). UTAH - Only few fields required controls in Kane County. (Knowlton, Hatch). Adult feeding conspicuous on alfalfa at Levan, Juab County. (Knowlton).

CLOVER LEAF WEEVIL (Hypera punctata) - UTAH - Damage spotty in alfalfa at Kanosh, Millard County, and at Santa Clara, Hurricane and Toquerville, Washington County. (Knowlton). WISCONSIN - Observed on alfalfa in more advanced areas. (Wis. Ins. Sur.). MICHIGAN - Light population of small larvae feeding on alfalfa in Shiawassee County April 13. (Dowdy). ILLINOIS - Larvae ranged 1-64 (average 12.8) per square foot in clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - MARYLAND - Averaged one adult per 10 sweeps on red clover in Anne Arundel County; also active in Worcester County clover. (U. Md., Ent. Dept.). ALABAMA - Heavy buildup continues in crimson clover over State. (McQueen). NEBRASKA - Adults averaged 2 per 10 sweeps in legumes in central and eastern areas. (Bergman). ILLINOIS - Adults ranged 0-20 (average 7.6) per 100 sweeps in clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.).

CLOVER HEAD WEEVIL (Hypera meles) - ALABAMA - Heavy buildup on crimson clover continues over State. (McQueen).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - OHIO - Adults severely damaged seedling sweetclover in Darke and Shelby Counties; 10-45 percent defoliation observed in many fields. (Lyon). ILLINOIS - Ranged 0-40 (average 2.5) per 100 sweeps in clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.). MICHIGAN - Adults active on clover and alfalfa seedlings in Shiawassee County. (Dowdy). UTAH - Feeding conspicuous on sweetclover foliage in several areas of Washington County. (Knowlton). WASHINGTON - Damaged roadside sweetclover along Snake River, south of Pullman, Whitman County, March 31. (Telford).

CLOVER SEED WEEVIL (Miccotrogus picrostris) - WISCONSIN - Observed on alfalfa in more advanced areas of State. (Wis. Ins. Sur.).

CUCUMBER BEETLES (Diabrotica spp.) - OKLAHOMA - Light counts of 4 D. undecimpunctata howardi per 10 sweeps noted in alfalfa in Cotton County (southwest); fewer than one per 10 sweeps noted in Choctaw County (southeast). (Okla. Coop. Sur.). UTAH - D. undecimpunctata tenella moderately numerous in Santa Clara-Washington area, Washington County. (Knowlton).

WIREWORMS (Limonius spp.) - WASHINGTON - Adults common (5 per 10 sweeps) on alfalfa at Prosser, Benton County. (Klostermeyer).

PEA APHID (Acyrtosiphon pisum) - WASHINGTON - Less abundant on alfalfa in eastern portion of State than at this time last year. (Landis). UTAH - Light to moderate on alfalfa in "Dixie area", Washington County. (Knowlton). ARIZONA - Continues a problem on alfalfa in many parts of State. Controls necessary in some instances. (Ariz. Coop. Sur.). NEW MEXICO - Moderate to heavy on alfalfa in Eddy County; only an occasional, light infestation found on alfalfa in Dona Ana County. (N. M. Coop. Rpt.). COLORADO - Light on alfalfa in northeast. Parasitized aphids prevalent in alfalfa in Johnstown area, Weld County, and Fort Collins area, Larimer County. (Simpson). OKLAHOMA - Light to heavy on alfalfa and vetch throughout State; counts per 10 sweeps ranged 35-400 in southeast, 600-5,000 in south central and 150-4,500 in southwest. Continues heavy in Stillwater area, Payne County. Spraying continues throughout State. (Okla. Coop. Sur.). MISSOURI - High populations observed in alfalfa throughout southwest with damage evident in fall-seeded alfalfa in area; ranged 15 to over 300 per sweep. (Munson, Thomas, Wood). NEBRASKA - Averaged 6 per 10 sweeps in alfalfa in Douglas and Sarpy Counties. (Bergman). SOUTH DAKOTA - Averaged one per 10 sweeps on alfalfa in Clay County. (Hintz). WISCONSIN - Present in most southwest area alfalfa; averaged generally about one per 50 sweeps in more advanced fields, with one per 10 sweeps noted in field of new seeding alfalfa. (Wis. Ins. Sur.). ILLINOIS - Ranged 0-35 (average 78) per 100 sweeps in clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.). MARYLAND - Generally light in Anne Arundel, Calvert and Worcester Counties; ranged less than one to 10 per sweep on alfalfa and red clover. (U. Md., Ent. Dept.). DELAWARE - No noticeable increase on alfalfa in New Castle County. (Burbutis).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Increasing in Marshall County, with 800 per 10 sweeps recorded. Counts per 10 sweeps ranged 200-250 in southwest, 150-500 in west central, 0-30 in southeast. (Okla. Coop. Sur.). TEXAS - Light populations on alfalfa in Hays and Guadalupe Counties being held in check by parasites and predators. (Texas Coop. Rpt.; Massey). ARIZONA - Appearing in some Maricopa County fields. Cool nights and rather cool days retarding buildup of predators and parasites. (Ariz. Coop. Sur.). UTAH - Rare on alfalfa in St. George-Santa Clara area and at Hurricane, Washington County. (Knowlton). ILLINOIS - Two wingless forms found in alfalfafield in Mason County. (Ill. Ins. Rpt.).

YELLOW CLOVER APHID (Therioaphis trifolii) - ILLINOIS - Ranged 0-120 (average 21) per 100 sweeps in clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.).

TARNISHED PLANT BUG (Lygus lineolaris) - OKLAHOMA - Nymphs and adults ranged light to moderate; counts per 10 sweeps ranged 8-20 in southeast, 20-40 in south central and 2-15 in southwest. (Okla. Coop. Sur.). NEBRASKA - Adults ranged 4-20 per 10 sweeps in central and eastern area legumes. (Bergman). ILLINOIS - Adults ranged 0-320 (average 49.7) per 100 sweeps in alfalfa and clover in west, west-southwest and central districts. (Ill. Ins. Rpt.). WISCONSIN - Observed on alfalfa in more advanced areas of State. (Wis. Ins. Sur.). MARYLAND - Adults averaged about 2 per 10 sweeps on alfalfa and red clover in Anne Arundel and Calvert Counties. (U. Md., Ent. Dept.).

PLANT BUGS (Adelphocoris spp.) - ILLINOIS - Nymphs of A. lineolatus and A. rapidus ranged 0-30 (average 6.6) per 100 sweeps in alfalfa and clover in west, west-southwest and central districts. (Ill. Ins. Rpt.).

LYGUS BUGS (Lygus spp.) - TEXAS - Widespread in Guadalupe and Hays County alfalfa; ranged 2-3 per 20 sweeps. (Texas Coop. Rpt.; Massey). UTAH - Lygus spp. adults, 80 percent L. elisus, common in alfalfa and fall wheat and in orchards examined in Salt Lake, Utah, Juab and Millard Counties. (Knowlton).

MEADOW SPITTLEBUG (Philaenus spumarius) - PENNSYLVANIA - Hatching in south central area legumes (Pepper); none hatched in legumes in Clearfield and Blair Counties (Adams, Udine). MARYLAND - Very small nymphs, first of season, noted on

red clover and weeds in Anne Arundel County, April 16. (U. Md., Ent. Dept.). OHIO - Nymphs in spittle masses observed in all southwest counties; heavy in Hamilton, Butler and Warren Counties, with 3-6 per leaflet. Nymphs light, 0-1 per leaflet, in Mercer and Auglaize Counties. Heavy on curled dock and thistle throughout red clover fields. (Lyon). ILLINOIS - Nymphs ranged 0-1 per 100 stems of clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.).

ONE-SPOT STINK BUG (Euschistus variolarius) - OHIO - Three adults per 50 sweeps collected in Preble County red clover field. (Rings, Lyon).

LEAFHOPPERS - UTAH - Dikraneura carniola moderate on margins of fall wheat fields in Nephi-Levan area, Juab County. (Knowlton). WISCONSIN - Empoasca spp. adults appearing in southern area. Single female found in alfalfa in northern Iowa County could not be determined. Aceratagallia sanguinolenta observed on alfalfa in more advanced areas. (Wis. Ins. Sur.).

ALFALFA CATERPILLAR (Colias eurytheme) - MARYLAND - Adults observed in alfalfa and clover in 3 southern counties. (U. Md., Ent. Dept.). NEBRASKA - Adults and larvae active in central and eastern area alfalfa. (Bergman).

ARMY CUTWORM (Chorizagrotis auxiliaris) - NORTH DAKOTA - Averaged one larva per linear foot in alfalfa in Richardson area, Stark County. Larvae half to nearly full grown. (N. D. Ins. Sur.). WYOMING - Averaged less than one larva per square foot in alfalfa in Fremont and Park Counties. (Fullerton).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - First and second-stage larvae active in Stillwater area, Payne County. Ranged 10-15 per 10 sweeps in Marshall County (south central) and 0-5 per 10 sweeps in Choctaw County (southeast). (Okla. Coop. Sur.). TEXAS - Light, noneconomic in Guadalupe County alfalfa. (Texas Coop. Rpt.; Massey).

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Light, noneconomic populations present in Guadalupe County alfalfa. (Texas Coop. Rpt.; Massey). WISCONSIN - Adults observed on alfalfa in more advanced areas. (Wis. Ins. Sur.).

ARMYWORM (Pseudaletia unipuncta) - MISSOURI - First small larvae of season observed in southwest area. (Munson, Thomas, Wood).

CLOVER LOOPER (Caenurgina crassiuscula) - WISCONSIN - Adults common in alfalfa in southwest area. (Wis. Ins. Sur.).

CUTWORMS - ALABAMA - Unspecified species damaging oats and small grain-clover mixtures in Baldwin County; controls necessary. (Wilson). TEXAS - Light to moderate, rather widespread infestations present on corn in Austin County. (Texas Coop. Rpt.; McClung). ILLINOIS - Several species, mainly Lacinipolia renigera and Feltia subgothica, ranged 0-6 (average 1.3) per square foot in clover and alfalfa in west, west-southwest and central districts. Nephelodes emmedonia ranged 0-20 (average 5.6) per 100 sweeps in west-southwest district. (Ill. Ins. Rpt.).

SPIDER MITES (Tetranychus spp.) - NEVADA - Continue medium in several alfalfa fields in Pahump Valley, Nye County. (Zoller).

GRASSHOPPERS - WISCONSIN - Eggs observed in southwestern area alfalfa fields previously having heavy populations appeared to have overwintered well, with minimum of predation evident. (Wis. Ins. Sur.). NORTH DAKOTA - Egg development survey conducted in portions of Stark, Hettinger, Grant, Dunn, Mountrail and McLean Counties. Development ranged clear to segmented. Species included Melanoplus sanguinipes, M. bivittatus and M. femurrubrum. Predators observed in large numbers in area east of Newtown, Mountrail County; average of 5 ground beetles and 2 bee fly larvae per square foot present. (Wilson, Brandvik). Egg development in Grant and Morton Counties 50 percent coagulated, 36 percent eye

spot, 14 percent segmented. Only M. sanguinipes encountered. Predators very scarce. (N. D. Ins. Sur.). COLORADO - Melanoplus bivittatus eggs in eye-spot stage in Crowley County. (Hantsbarger). UTAH - Few nymphs and overwintered adults of unspecified species observed in Santa Clara area, Washington County. (Knowlton).

NORTHERN MASKED CHAFER (Cyclocephala borealis) - MARYLAND - Moderate larval numbers noted in sodland being plowed for corn in Carroll County. (U. Md., Ent. Dept.).

A FLEA BEETLE (Phyllotreta sp., near albionica) - UTAH - Damaged planted pubescent wheatgrass at New Harmony, Washington County, during early April. Det. by L. G. Gentner. (Knowlton, Esplin).

A BLISTER BEETLE (Meloe sp.) - WASHINGTON - Damaging Siberian wheatgrass at Mesa, Franklin County, shows preference for this variety over other grasses. (Telford).

MEADOW PLANT BUG (Leptopterna dolabratus) - ILLINOIS - Nymphs ranged 0-880 (average 257) per 100 sweeps of grass in west-southwest district. (Ill. Ins. Rpt.).

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Pupation of overwintering borers 32 and 20 percent in Kent and Sussex Counties, respectively. (Burbutis). MARYLAND - No pupae observed April 16 in 3 corn fields checked in Anne Arundel and Calvert Counties. (U. Md., Ent. Dept.). OHIO - No pupation noted in Van Wert County; spring borer population appears reduced 95 percent from fall population in area. (Cannon, Wells). SOUTH DAKOTA - Winter mortality ranged 2-18 percent in 8 northeast counties; single pupal cases of Horogenes sp. found in Clark, Codington, Day and Grant Counties, and single specimen of Sympiesis sp. found in Deuel County. Average mortality for district 9.25 percent. In north central district, mortality 2 percent in Brown County, 6 percent in Spink County. In central district, mortality 4 percent in Beadle County. (Hintz).

CEREAL LEAF BEETLE (Oulema melanopa) - MICHIGAN - Adults being found in Berrien and Cass Counties outside area originally determined as infested. Survey being intensified to determine limits of spread. Egg laying continuing; being found on wheat and quackgrass. Some eggs observed in "dark" stage which precedes hatching. (Cath, Turner).

CORN FLEA BEETLE (Chaetocnema pulicaria) - OKLAHOMA - Heavy on small acreage of corn in Carter County (south central). (Okla. Coop. Sur.). ILLINOIS - Ranged 0-60 (average 6.4) per 100 sweeps in wheat in west-southwest and central districts. Counts in grass in west-southwest district ranged 0-50 (average 11.1) per 100 sweeps. (Ill. Ins. Rpt.).

GREENBUG (Schizaphis graminum) - MISSOURI - Increased in southwest area wheat and barley; ranged 0-30 per foot of drill row in wheat. Somewhat lower in barley; 0-18 per linear foot. (Munson, Thomas, Wood). OKLAHOMA - Continues generally noneconomic to light throughout State; no treatments reported. Predators reported reducing populations in Bryan County. (Okla. Coop. Sur.).

ENGLISH GRAIN APHID (Macrosiphum avenae) - OKLAHOMA - Light on wheat checked in central and southwest areas; no buildup occurring at present in heads of plants. (Okla. Coop. Sur.). ILLINOIS - Ranged 0-20 (average 11.6) per 100 sweeps in wheat in west-southwest and central districts. (Ill. Ins. Rpt.). WISCONSIN - Few nymphs found in rye in Trempealeau County; more common in cover crop fields previously planted with lima beans. (Wis. Ins. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - ARIZONA - Damaging many fields of grain just in heading stage; tying up and holding back release of awns. (Ariz. Coop. Sur.). NEW MEXICO - Light on barley checked near Hatch, Dona Ana County. (N. M. Coop. Rpt.). TEXAS - Spotted, light infestations, probably this species, appearing on 8-10 inch grain sorghum in Jackson and Victoria Counties. (Texas

Coop. Rpt.; Bales). OKLAHOMA - Continues light in Johnson grass in southeast. (Okla. Coop. Sur.).

YELLOW SUGARCANE APHID (*Sipha flava*) - OKLAHOMA - Noted in wheat in Hennessey area, Kingfisher County. (Okla. Coop. Sur.).

SIX-SPOTTED LEAFHOPPER (*Macrosteles fascifrons*) - WISCONSIN - Males and females prevalent compared with other years, in rye fields in low lands along Mississippi River; 3-8 per 100 sweeps. (Wis. Ins. Sur.). SOUTH DAKOTA - First of season taken on alfalfa in Clay County; averaged 3 per 10 sweeps. (Hintz). OKLAHOMA - Unidentified species reported in CEIR 13(14):316 and 13(16):392 as damaging barley in some areas of Carter and Bryan Counties determined as this species by J. P. Kramer. (Okla. Coop. Sur.).

CHINCH BUG (*Blissus leucopterus*) - NEBRASKA - Adults ranged 6-8 per 10 sweeps in wheat in Dodge and Saunders Counties. (Bergman). ILLINOIS - Ranged 0-10 (average 0.7) per 100 sweeps in wheat in west-southwest and central districts, and 0-10 (average 2.2) per 100 sweeps in grass in west-southwest district. (Ill. Ins. Rpt.).

THRIPS - ALABAMA - Unidentified species continues to build up on grasses, oats, clovers and vetch along field borders throughout southern and central areas. (McQueen). UTAH - Active in fields of fall wheat in Nephi-Levan area, Juab County. (Knowlton).

HESSIAN FLY (*Phytophaga destructor*) - KANSAS - Adults emerging in Lane County (west central); egg laying in progress. "Flax-seed" examination showed some empty pupal cases; white larvae also noted. (DePew, Apr. 12). OHIO - Light to moderate in volunteer wheat in most southwest counties. Examination of "flax-seeds" revealed advanced pupation; no adult emergence observed. (Lyon).

BROWN WHEAT MITE (*Petrobia latens*) - KANSAS - Populations decreased in Stevens County (southwest) as result of local showers; noneconomic at present. White, overwintering eggs being deposited, indicating present population should decline in near future. (DePew, Apr. 12). OKLAHOMA - Light to moderate in wheat in central, southwest, west central and panhandle areas; populations declining in El Reno area, Canadian County. Populations reported increasing in Cimarron County area (panhandle). (Okla. Coop. Sur.). UTAH - Moderate on dryland fall wheat in areas west of Midvale, Salt Lake County, and Levan Ridge, Juab County. Very light on barley and wheat examined in "Dixie area" of Washington County. (Knowlton). NEVADA - Heavy populations continue to cause medium damage to wheat and seedling alfalfa in Pahrump Valley, Nye County. (Zoller).

WINTER GRAIN MITE (*Penthaleus major*) - MISSOURI - Ranged 0-11 per linear foot of drill row in barley and 0 to over 30 per square foot in orchardgrass in southwest area. (Munson, Thomas, Wood).

FRUIT INSECTS

TENT CATERPILLARS (*Malacosoma* spp.) - WASHINGTON - *M. pluviale* larvae appearing; moderately heavy on apple and pear south of Friday Harbor, Island County. (Baker, Mar. 27). CALIFORNIA - *Malacosoma* sp. larvae heavy on nursery stock cherry trees in Auburn, Placer County. (Cal. Coop. Rpt.). TEXAS - Moderate to heavy, widespread infestations of *M. americanum* present on wild plum in Coryell and McLennan Counties. (Texas Coop. Rpt.; Jackson). MISSOURI - *M. americanum* noted on peach trees in southwest area. (Munson, Thomas, Wood). CONNECTICUT - *M. americanum* observed feeding on buds. Tent caterpillars now statewide. (Savos).

CODLING MOTH (*Carpocapsa pomonella*) - INDIANA - Pupation increased at Vincennes, Knox County; about 90 percent of overwintering larvae pupated. (Hamilton, Apr. 16).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - MARYLAND - First egg masses of season found April 16 on apple at Hancock, Washington County. (U. Md., Ent. Dept.). PENNSYLVANIA - First egg mass of season noted on apple in Adams County. (Pepper). INDIANA - Oviposition increased at Vincennes, Knox County; adults still active. No eggs hatched to April 16. (Hamilton). KANSAS - Ovipositing in Doniphan County; at least 12 egg masses per tree easily seen. Counts of 4-5 made at a glance. No hatching observed, but few light brown color. (Eshbaugh).

PEACH TREE BORER (Sanninoidea exitiosa) - GEORGIA - Continues abundant in central area peach belt. Average of 3.8 borers per tree removed from 7-year-old peach orchard. This is number one peach insect problem in State at present time. (Snapp). KANSAS - Ranged 3-5 borers in each of 25 young, untreated peach trees in Sedgwick County. (Eshbaugh, Apr. 11).

PEACH TWIG BORER (Anarsia lineatella) - UTAH - Moderate in peach orchards examined in Santa Clara, St. George, Hurricane and La Verkin, Washington County. (Knowlton, Apr. 16).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - INDIANA - No adults captured in 5 traps in one orchard at Vincennes, Knox County, as of April 16. (Hamilton).

AN OLETHREUTID MOTH (Grapholitha sp.) - OREGON - Larvae, possibly this genus, required control in Polk County cherry orchard April 18. Caused extensive damage to blossoms. (Stephenson).

CANKERWORMS - CONNECTICUT - Hatching in New Haven area. Observed at Glastonbury, Hartford County, and Storrs, Tolland County. (Savos).

UNSPOTTED TENTIFORM LEAF MINER (Callisto geminatella) - KANSAS - Large numbers in orchard in Doniphan County; controls probably necessary. (Eshbaugh).

LEAF CRUMPLER (Acrobasis indigenella) - TEXAS - Attacking backyard plum trees in Wharton County. (Texas Coop. Rpt.; Massey).

LEAF ROLLER MOTHS - OREGON - Eggs of Archips rosana hatching; larval activity general in Willamette Valley filbert orchards April 14. (Capizzi). CALIFORNIA - Larvae and pupae of Amorbia sp. range light to heavy on avocado leaves in Corona, Riverside County. (Cal. Coop. Rpt.).

APPLE TWIG BORER (Amphicerus bicaudatus) - KANSAS - Feeding on young apple trees in Sedgwick County; about 2 percent of trees show damage with 1-3 holes per tree. (Eshbaugh, Apr. 11).

APPLE APHID (Aphis pomi) - CONNECTICUT - Present in various locations over State, but still low in abundance. (Savos). PENNSYLVANIA - Abundant on apple in Clearfield County. (Adams). WISCONSIN - Eggs, probably this species, abundant on apple twigs in Gays Mills area, Crawford County, and some areas of Rock County; hatched in latter location. (Wis. Ins. Sur.).

ROSY APPLE APHID (Anuraphis rosea) - CONNECTICUT - Evident in various locations over State; still appears low in abundance. (Savos). PENNSYLVANIA - Appearing on apple in Clearfield County. (Adams). COLORADO - Increasing in apple orchards of western slope. (Jenkins). UTAH - Curling apple leaves in several orchards at Hurricane-Toquerville area, Washington County. (Knowlton, Apr. 16).

WOOLLY APPLE APHID (Eriosoma lanigerum) - ARIZONA - Continues to increase on apple trees in Graham County. (Ariz. Coop. Sur.). NORTH CAROLINA - Probably this species, injured apple roots in Beaufort County. (Robertson).

PEAR PSYLLA (Psylla pyricola) - CONNECTICUT - Eggs found in most areas of State; none hatched at present. (Savos).

PLANT BUGS - CONNECTICUT - Observed on apples, peaches and pears in New Haven area. (Savos). PENNSYLVANIA - Numerous in south central area peach orchards. (Pepper).

EUROPEAN RED MITE - WISCONSIN - Eggs relatively abundant on many apple trees in Gays Mills area, Crawford County. (Wis. Ins. Sur.). INDIANA - Hatching advanced rapidly at Vincennes, Knox County; about 75 percent of overwintered eggs hatched. (Hamilton, Apr. 16). OHIO - Approximately 1 percent hatched on April 3 in apple orchard in Wayne County; 20-30 percent hatched in Franklin County. (Forsythe, Lyon, Apr. 18). PENNSYLVANIA - Hatching on apple in Adams County (Pepper); about to hatch on sweet cherry and other fruits in Clearfield County (Adams). CONNECTICUT - Eggs present in most areas of State; none hatched yet. (Savos).

A FRUIT-TREE MITE (Bryobia rubrioculus) - MICHIGAN - Hatching noted on fruit trees in Ingham and Berrien Counties. (Carpenter). UTAH - Below normal numbers on apple, pear, peach and apricot trees in Washington County, even on untreated trees. (Knowlton, Apr. 16).

PECAN NUT CASEBEARER (Acrobasis caryae) - ALABAMA - Active in Autauga County; controls being applied. (Buttram). TEXAS - Overwintered larvae found in about 4-5 percent of young shoots in one Guadalupe County grove. (Newton).

PECAN LEAF CASEBEARER (Acrobasis juglandis) - FLORIDA - Infesting pecan at Monticello, Jefferson County (Apr. 10). (Fla. Coop. Sur.).

BLACK PECAN APHID (Melanocallis caryaefoliae) - ALABAMA - Appearing in large populations for time of year in Lee County; largest population in 15 years. (Buttram).

A XYELID (Megaxyela langstoni) - TEXAS - Light population, probably this species, attacking backyard pecan trees in Travis County. (Cook).

A WEEVIL (Compsus auricephalus) - TEXAS - Occasional adults found on pecan trees in Guadalupe County. (Newton).

GRAPE FLEA BEETLE (Altica chalybea) - FLORIDA - Moderate on grape at De Land, Volusia County (Apr. 9). (Fla. Coop. Sur.).

PAPAYA FRUIT FLY (Toxotrypana curvicauda) - FLORIDA - Moderate on papaya (Carica papaya) at Miami Springs, Dade County (Apr. 11). (Fla. Coop. Sur.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Biological Control Zone - Infestation found in Municipio Tzucacab, Yucatan, on 159 trees; heavy on 55 trees and light on 104 trees. In this municipio, 4,000 specimens of a parasitic eulophid (Prospaltella opulenta) were liberated. In areas where a parasitic platygasterid (Amitus hesperidum) and/or Prospaltella clypealis have been controlling citrus blackfly; liberations of P. opulenta planned, with expectation of fewer fluctuations in parasitism due to climatic factors. In State of Tamaulipas, 44,720 trees on 205 properties showed 1,517 trees on 72 properties infested; some trees with considerable number of infested leaves. At Ciudad Mante, Tamaulipas, 218,700 P. opulenta captured; 171,200 released in citrus groves in Apatzingan, Michoacan. In number of locations, undetermined quantity of parasites captured and liberated in groves near locations where captured. Heavy populations of citrus blackfly continue to exist in Apatzingan, Michoacan; situation not expected to improve materially until late summer. Chemical Control Zone - Inspection of 116,257 citrus trees on 3,321 properties in the States of Nuevo Leon, Tamaulipas, Sonora and Baja California negative. First treatment to 612 trees on one property and second treatment to 1,705 trees on 3 properties at Linares, Nuevo Leon, completed. (PPC, Mex. Reg., Mar. Rpt.).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - FLORIDA - Eleventh application made in Broward County and ninth in Palm Beach County; trapping negative during March. (PPC, South. Reg., Mar. Rpt.).

A PINK CITRUS RUST MITE (Aculus pelekassi) - FLORIDA - Severe on Citrus sinensis at Fort Lonesome, Hillsborough County, (Apr. 12). (Fla. Coop. Sur.).

TRUCK CROP INSECTS

GREEN PEACH APHID (Myzus persicae) - OHIO - Nymphs and adults light to moderate on tomato and cabbage seedlings in greenhouse in Darke County. (Lyon, Apr. 18).

LOOPERS AND CUTWORMS - ARIZONA - Loopers continue a problem in late lettuce in Maricopa County; cutworms causing injury to many transplanted tomatoes, peppers and other plants in Graham County. (Ariz. Coop. Sur.).

PACIFIC COAST WIREWORM (Limoniuss canus) - WASHINGTON - Larvae and newly formed adults (not emerged) recovered from soil samples from potato fields; 20 larvae and 1 adult from 20 post-hole samples in 50-acre field. Lighter infestations nearby, Quincy, Grant County. (Landis, Apr. 12). Newly emerged adults on potato land at Moses Lake, Grant County. (Landis, Apr. 19).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - ALABAMA - Small numbers of eggs hatching on potato plants in Lee County. (McQueen). TEXAS - Moderate to heavy on nightshades in Hays and Guadalupe Counties. (Texas Coop. Rpt.; Massey).

IMPORTED CABBAGEWORM (Pieris rapae) - MARYLAND - Adults noted in Anne Arundel, Calvert and Prince Georges Counties. (U. Md., Ent. Dept.). PENNSYLVANIA - Adults abundant in south central area. (Pepper). ALABAMA - Adults numerous in Lee County. (McQueen). OHIO - Adults in flight throughout southwestern counties; groups of 2-5 common. (Lyon, Apr. 17).

CABBAGE APHID (Brevicoryne brassicae) - OKLAHOMA - Ranged 0-20 per young cabbage plant in 4-6 leaf stage in Bixby area, Tulsa County. Large percentage of aphids winged. (Okla. Coop. Sur.).

FLEA BEETLES (Phyllotreta spp.) - MARYLAND - Adults noted on wild crucifers near gardens at Barstow, Calvert County. (U. Md., Ent. Dept.).

CABBAGE MAGGOT (Hylemya brassicae) - NEW JERSEY - Adults active in cabbage on warm days in southern area. (Ins.-Dis. Newsltr., Apr. 16).

PEA APHID (Acyrtosiphon pisum) - MARYLAND - Winged forms noted on newly emerged garden peas at Prince Frederick, Calvert County. (U. Md., Ent. Dept.).

COTTON FLEAHOPPER (Psallus seriatus) - TEXAS - Widespread, light adult numbers attacking snap beans in Cameron County. (Texas Coop. Rpt.; Stephens).

BEET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Controls underway in Kings and Fresno Counties, and locally in Kern County. Recent rains may stimulate growth of weed hosts to extent that second generation could develop. Mortality counts on treated ground in Blythe District, Riverside County, indicate 95-98% kill. Acreages which supported light populations and not treated, now drying; populations remain low. No melon plants found infected with curly top in Palo Verde Valley, Riverside County. Beet fields checked in Imperial Valley showed counts of one per 10 sweeps, but no damage expected as crop is nearing maturity. Only occasional tomato plant found infected with curly top during survey of tomato plantings in Imperial Valley, Imperial County. (Cal. Coop. Rpt.). WASHINGTON - Overwintering population averaged one per 5 square feet on tumble mustard and flixweed in southeast area. (Klostermeyer). UTAH - Averaged 2 per 50 sweeps in fields of sugar beets for seed at Washington, Washington County; occasional adult taken on tansy mustard. (Knowlton, Apr. 16). WYOMING - Overwintering adults on winter annuals in Washakie County; averaged 0.5 per square foot of host area. This number is opposed to counts of March 19, when 5 were taken from a total of 200 square-foot samples. (Fullerton).

ONION MAGGOT (Hylemya antiqua) - IDAHO - First adults of season noted in southwestern area April 12. (Scott).

ASPARAGUS BEETLE (Crioceris asparagi) - DELAWARE - First adults of season feeding on asparagus April 15 in area of Sussex County. Feeding injury and adults present but scarce on asparagus in New Castle and Kent Counties. (Burbutis).

STRAWBERRY LEAF ROLLER (Ancylis comptana fragariae) - KANSAS - Emergence began in Sedgwick County. (Eshbaugh, Apr. 11).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - NEW JERSEY - Dry weather has been favorable; built up slightly on strawberries, even during cool weather. Populations could explode with advent of warm weather. (Ins.-Dis. Newsltr., Apr. 16).

TOBACCO INSECTS

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - MARYLAND - First adults of season emerged from winter quarters April 16 around tobacco beds in Calvert County. (U. Md., Ent. Dept.). GEORGIA - Moderate to heavy on tobacco in several southern counties. (Johnson).

GREEN JUNE BEETLE (Cotinis nitida) - MARYLAND - Evidence of larval activity noted in tobacco bed at Barstow, Calvert County. (U. Md., Ent. Dept.).

TOBACCO BUDWORM (Heliothis virescens) - GEORGIA - Light on tobacco in several southern counties. (Johnson).

GARDEN SPRINGTAIL (Bourletiella hortensis) - MARYLAND - Common in and around tobacco beds in Calvert County; injury light to newly emerged plants. (U. Md., Ent. Dept.).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Some indications of emergence noted in lower Rio Grande Valley; occasional adult found and some terminal feeding evident. (Deer).

BOLLWORM (Heliothis zea) - TEXAS - Building up in cotton terminals in lower Rio Grande Valley area. (Deer).

PINK BOLLWORM (Pectinophora gossypiella) - FLORIDA - Light on Hibiscus sp. at Marathon, Monroe County, April 10. Det. by W. Breidenbach. (Fla. Coop. Sur.). ARIZONA - Another moth emerged from surface bolls in cages in Graham County. (Ariz. Coop. Sur.).

A PYRALID MOTH (Noctuella rufofascialis) - TEXAS - Larvae damaging cotton terminals in southeast Starr County. (Deer).

COTTON APHID (Aphis gossypii) - TEXAS - Light on cotton in lower Rio Grande Valley, upper coastal, coastal bend and south central areas. (Texas Coop. Rpt.).

FLEAHOPPERS - ARIZONA - Few present on stub cotton in Pinal and Maricopa Counties. (Ariz. Coop. Sur.). TEXAS - Heavy migrations of Psallus seriatus into cotton occurring in lower Rio Grande Valley; moderate numbers appearing in coastal bend area. Few nymphs appearing in these areas. Numbers still low in east central area. (Texas Coop. Rpt.).

LEAFHOPPERS - ARIZONA - Few being noted on stub cotton in Pinal and Maricopa Counties. (Ariz. Coop. Sur.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BARK BEETLES - TEXAS - Since mid-February, total of 1,296 brood trees located by aerial detection flights; these mostly single tree infestations scattered over major portion of 1962 epidemic area. Of this total, 627 brood trees controlled; 305 contained Ips spp. and/or Dendroctonus terebrans, but no D. frontalis; 170 trees damaged by other agents, such as fire scorch and needle blight; and 194 trees remained to be ground checked. Active brood trees reported from Hardin, Liberty, Polk, Tyler and San Jacinto Counties. Landowners continued efforts during March to locate and control brood trees. Scattered mortality in loblolly and shortleaf pine stands by D. terebrans continued during March. Reports indicated logging, lightning and pipeline construction primary causes of increased infestation. Controls being undertaken on National Forests in Montgomery, Trinity and southern Houston Counties. (Texas For. Pest Comm., March Rpt.).

CALIFORNIA - Ips spp. severely damaging young ponderosa pines in Tehama-Mendocino National Forest. Some 360 trees killed in 5-acre stand, with rapid spread continuing in young trees. Infested trees being sprayed. (T. E. Blackwell, USFS). Ponderosa pine in Canyon Creek area shows heavy loss in 300-acre stand at low elevation due to Dendroctonus brevicomis; infestation on private property and no control anticipated. D. brevicomis damaging on small acreages in Berry Creek area and Paradise area; sanitation logging planned in both areas. Damage in these areas attributed to few windthrown trees in 1962 blowdown, Butte County. (C. L. Wagener, CDF). D. monticolae causing tree loss in sugar pines in Dark Canyon-Scilla District of Tahoe-Sierra National Forest; more than 100 trees killed in 60-acre stand. Young and old trees being attacked. (J. Granger, Jr., USFS).

A PINE WEEVIL (Pissodes approximatus) - PENNSYLVANIA - Hatching on Scotch pine in Clearfield County. (Adams).

SILVER-SPOTTED TIGER MOTH (Halisidota argentata) - CALIFORNIA - Heavy larval population appearing in 40-acre stand of white and Douglas-fir trees in Palmer Canyon area, Humboldt County. (D. M. Peterson, CDF).

A WEBWORM (Tetralopha sp.) - OHIO - Dead, broken needle aggregates found on twigs of pine along roadside in Athens County; 2-3 needle masses per tree noted. (Walker, Lyon, Apr. 10).

COOLEY SPRUCE GALL APHID (Chermes cooleyi) - CALIFORNIA - Adults heavy locally on Pseudotsuga menziesii in Hammond, Humboldt County. (Cal. Coop. Rpt.).

PINE BARK APHID (Pineus strobi) - TENNESSEE - Hatching on white pine. (Mullett, Apr. 16).

A DOUGLAS-FIR CONE MIDGE (Contarinia oregonensis) - CALIFORNIA - Survey conducted during 1962 to determine insect damage to Douglas-fir cones and seeds in 5 National Forests in northern portion of State. Seeds were collected from 21 different locations and analysis showed 83 percent of 1962 crop destroyed. C. oregonensis accounted for 56 percent of damage, and in association with other insects for an additional 33 percent, for a total of 89 percent of the damage. Control investigations are planned during 1963. (R. Hall, USFS).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - NEW JERSEY - Hatching underway on wild cherry. (Ins.-Dis. Newsltr., Apr. 16). PENNSYLVANIA - Tents visible in south central area; population low. (Pepper). MARYLAND - Tents numerous and conspicuous on wild cherry and neglected apple and Prunus spp. in Anne Arundel, Calvert and Prince Georges Counties. (U. Md., Ent. Dept.). FLORIDA - First seasonal adult collected at ultraviolet light trap at Gainesville, Alachua County, April 11. Collected and det. by L. A. Hetrick. (Fla. Coop. Sur.). MISSOURI - Present on cherry, plum, locust and hickory in southwest area. (Munson, Thomas, Wood). WISCONSIN - Eggs hatched on chokecherry tree observed each year in Iowa County; hatch date was April 16, compared with April 26, 1962. (Wis. Ins. Sur.).

TENT CATERPILLARS (Malacosoma spp.) - TEXAS - M. disstria and Malacosoma sp., probably texanum, damaging live and post oaks in wide area in central part of State involving approximately 25 counties; M. disstria most widely and generally distributed. Approximately three-fourths of live oaks in Hays and Blanco Counties 80-100 percent defoliated. Most larvae full grown and cocoons have been spun. (Newton).

GYPSY MOTH (Porthetria dispar) - NEW YORK - New egg clusters found at Orleans, Jefferson County, about 0.25 mile west of previously known infestation. In Essex County, 7 trailer courts found lightly infested. NEW JERSEY - Nineteen additional egg masses found in vicinity of positive trap sites. (PPC, East. Reg., Mar. Rpt.).

BROWN-TAIL MOTH (Nygmia phaeorrhoea) - MAINE - New infestation found at Wells, York County, approximately 2 miles south of 1962 discovery at Moody Beach. MASSACHUSETTS - Two new infestations found on Cape Cod. Light infestation at Provincetown involves approximately 800 acres along 5-6 mile area about 1,500-2,000 feet wide. Very heavy infestation at Dennis consists of approximately 150 acres. Additional scouting from Hyannis Port to Harwich Port on Nantucket Sound and Yarmouth Port to East Dennis on Cape Cod negative. (PPC, East. Reg., Mar. Rpt.).

BUCK MOTH (Hemileuca maia) - TEXAS - Light to heavy on live and post oaks in Hays, Blanco, Gillespie, Llano, San Saba, Lampasas, Burnet and Williamson Counties. (Newton).

A CANKERWORM - TEXAS - Heavy, local populations of an undetermined species appearing on shade trees, especially hackberry, in Jefferson County. (Crocker).

MOURNING-CLOAK BUTTERFLY (Nymphalis antiopa) - NEVADA - Larvae medium on elms in Las Vegas, Clark County. (Nichols).

ELM LEAF BEETLE (Galerucella xanthomelaena) - OKLAHOMA - Egg deposition underway in Stillwater area, Payne County. (Okla. Coop. Sur.). INDIANA - Collected for first time at Ogden Dunes, Porter County, on April 10. (Matthew).

EUROPEAN FRUIT LECANIUM (Lecanium corni) - OKLAHOMA - Moderate on elm in Stillwater area, Payne County. (Okla. Coop. Sur.).

HACKBERRY-NIPPLE-GALL MAKER (Pachypsylla celtidismamma) - NEBRASKA - Adults ranged 10-30 per twig, with females ovipositing on young hackberry tree leaves in Douglas and Lancaster Counties. (Bergman).

A JUNIPER TWIG GIRDLER (Periploca nigra) - CALIFORNIA - Larvae medium in trunks of Juniperus chinensis nursery stock in San Diego, San Diego County. (Cal. Coop. Rpt.).

A LEAF ROLLER MOTH (Amorbia sp.) - CALIFORNIA - Larvae heavy on leaves of strawberry madrone (Arbutus unedo) in Kensington, Contra Costa County. (Cal. Coop. Rpt.).

SPRUCE APHID (Aphis abietina) - OREGON - Damaging up to 30 percent of spruce foliage in large Portland area nursery April 17. (Larson).

APHIDS - ARIZONA - Aphis nerii a problem in nurseries in Pinal County. (Ariz. Coop. Sur.). NEW MEXICO - Unspecified species moderate to heavy in rose gardens in Las Cruces, Dona Ana County; most homeowners applying controls. Cinara tujaefilina heavy and a problem on arborvitae in many areas of State. (N. M. Coop. Rpt.). UTAH - Unspecified species numerous on roses, hibiscus, pittosporum and on tulip and iris flowers; Cinara sp. fewer on arborvitae; and Macrosiphum sp. on pansies. (Knowlton, Apr. 16). OKLAHOMA - Several species common on variety of ornamentals throughout State. Predators and parasites building up on ornamentals

in Stillwater area, Payne County. (Okla. Coop. Sur.). MISSOURI - Several species feeding on ornamentals in southwest area. (Munson, Thomas, Wood). ALABAMA - Build-up of Macrosiphum rosae continues on untreated roses; ranged 10-30 per bud branch. (McQueen). WISCONSIN - Approximately 80 percent of Anuraphis viburniphila eggs hatched April 12-16; many immatures have molted once. (Wis. Ins. Sur.). PENNSYLVANIA - Myzus sensoriatus collected on Hypericum sp. in Centre County during April, and Myzus ornatus very abundant on leaves of Coleus sp. in a home at State College during March. Det. by A. N. Tissot. These are new State records for both species. (Pepper).

OLIVE SCALE (Parlatoria oleae) - CALIFORNIA - Medium on leaves of Viburnum sp. in Orosi, Tulare County. (Cal. Coop. Rpt.).

ITALIAN PEAR SCALE (Epidiaspis piricola) - CALIFORNIA - Medium on bark and twigs of toyon (Photinia arbutifolia) in Fairfield, Solano County. (Cal. Coop. Rpt.).

JUNIPER SCALE (Diaspis carueli) - OHIO - Infested Pfitzer juniper twigs at Fostoria, Seneca County; examination revealed extreme winter mortality. (Neiswander, Apr. 17).

A GROUND MEALYBUG (Rhizoecus leucosomus) - FLORIDA - Moderate on Mesembryanthemum sp. at Sanford, Seminole County, February 15, 1963. Det. by R. F. Wilkey. This is a new State record. (Fla. Coop. Sur.).

Coccids in Florida - Aonidiella taxus moderate on Podocarpus macrophyllus maki at Winter Haven, Polk County (Apr. 9). Asterolecanium pustulans moderate on Grevillea robusta at Stock Island, Monroe County (Apr. 5). Chrysomphalus aonidium light to moderate on Nerium spp. at Holly Hill, Volusia County (Apr. 9), and moderate to severe on Carissa sp. at Merritt Island, Brevard County (Apr. 11). Fiorinia theae moderate to severe on Ilex sp. and Camellia sp. at Eau Gallie, Brevard County (Apr. 9). Phenacaspis cockerelli severe on Sabal mexicana at Winter Haven (Apr. 3); severe on Strelitzia reginae at Bradenton, Manatee County (Apr. 11). Pinnaspis strachani moderate on Melia azedarach at Allandale, Volusia County (Apr. 12). Protopulvinaria pyriformis moderate on 200 Trachelospermum jasminoides at Vine-land, Orange County (Apr. 8). Pseudococcus citri light to moderate on Hoya carnosa at Holly Hill (Apr. 9). Saissetia hemisphaerica light to moderate on Nerium sp. at Holly Hill (Apr. 9). (Fla. Coop. Sur.).

ROSE LEAFHOPPER (Edwardsiana rosae) - UTAH - This species and Virginia-creeper leafhopper (Erythroneura ziczac) now on respective hosts at St. George, Washington County, but not yet numerous. (Knowlton).

WHITEFLIES - CALIFORNIA - Additional light to heavy infestations of Aleurotrachelus jelinekii found in several locations in Tulare County. Infestations found in Fresno for first record of A. jelinekii in Fresno County. Infestations have been generally heavy. Aleyrodes sp. and Aleuroplatus gelatinosus medium on Quercus sp. in Fair Oaks, Sacramento County. Whiteflies have been more abundant during past 3 seasons than for many years; species normally present in low numbers now becoming evident. (Cal. Coop. Rpt.). ALABAMA - First hatch of season of Trialeurodes vaporariorum reported in Lee County; evidently very light, as only small number of adults noted. (McQueen).

EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) - PENNSYLVANIA - Damaging roots of chrysanthemum plants out-of-doors in Bellefonte, Centre County. (Udine).

HOLLY LEAF MINERS (Phytomyza spp.) - DELAWARE - Most larvae now pupated. (Burbutis).

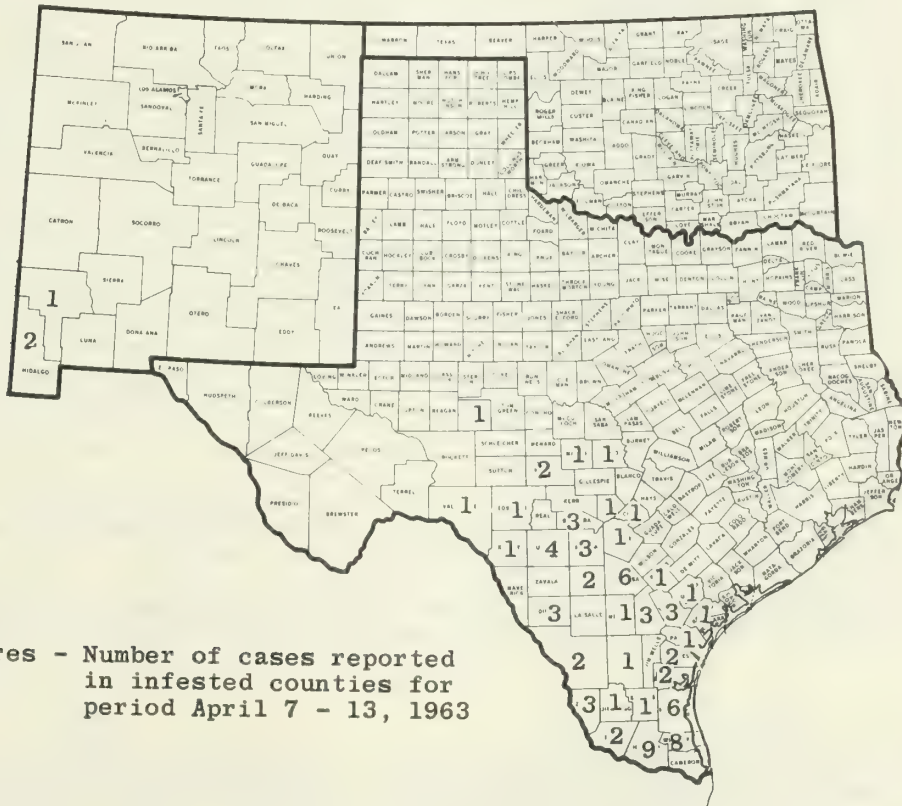
AN ERIOPHYID MITE (Aceria knorrii Keifer) - FLORIDA - Collected from inflorescences of Bidens pilosa at Lake Alfred, Polk County, May 11, 1962, by L. C. Knorr. Det. by H. H. Keifer. This is a new species. (Fla. Coop. Sur.).

A RUST MITE (Acritonotus denmarki Keifer) - FLORIDA - Collected on Roystonea elata at Fort Lauderdale, Broward County, March 16, 1962, by H. A. Denmark. Det. by H. H. Keifer. This is a new species. (Fla. Coop. Sur.).

INSECTS AFFECTING MAN AND ANIMALS

STATUS OF THE SCREW-WORM (Cochliomyia hominivorax) IN THE SOUTHWEST

Screw-worm continues to disperse in ever-widening areas of TEXAS and NEW MEXICO. Reports continue to indicate extremely small native populations; however, single infestations being reported in many counties. A total of 80 screw-worm cases identified from Texas and 3 cases from New Mexico during period April 7-13. Fly release area has been extended 50 miles further north and east. The portion of barrier zone between Big Bend area and El Paso discontinued to obtain sufficient flies for added area north and east of previous fly release zone. That portion of fly barrier zone that has been discontinued represents area least likely to create threat to total eradication area. Flies will continue to be released along Rio Grande in this area at rate of 1,000 sterile flies per linear mile. Each infestation will continue to be treated as emergency operation, infested herds will be sprayed, and additional flies will be released. A total of 113,329,700 sterile screw-worm flies was released during period April 7-13. (Anim. Dis. Erad. Div.).



Figures - Number of cases reported
in infested counties for
period April 7 - 13, 1963

HORN FLY (Haematobia irritans) - TEXAS - Ranged 50-100 per animal on Cameron County cattle. (Texas Coop. Rpt.; Day). OKLAHOMA - Becoming common in most areas, but numbers light. Counts per head, by county, as follows: Texas 25; Dewey 40-50; McCurtain 200; Payne 150. (Okla. Coop. Sur.). MISSOURI - Ranged 0-50 per animal in central area; average 25. (Cates). INDIANA - Emergence observed April 10 in southern area; noted on 2 of 75 cows. (Dobson).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Occasional specimens noted in Stillwater area, Payne County. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - ILLINOIS - Varied 0-10 and averaged about 3 per face in west district on 2 herds of cattle, April 15-18. (Ill. Ins. Rpt.). INDIANA - Found in Lafayette area, Tippecanoe County. (Dobson).

HOUSE FLY (Musca domestica) - OHIO - Adults found in Cuyahoga County by the thousands; control difficult due to canaries and parakeets in vicinity of infestations. (Holdsworth). OKLAHOMA - Averaged 1 per Scudder grid in barns in Stillwater area, Payne County. (Okla. Coop. Sur.).

BLOW FLIES - UTAH - Various species common in "Dixie area" of Washington County. (Knowlton).

MOSQUITOES - UTAH - Annoying in fields at Washington, Washington County. (Knowlton). OKLAHOMA - Heavy and causing considerable annoyance in Stillwater, Payne County; adults, larvae and pupae present. (Okla. Coop. Sur.). OHIO - Larvae abundant in forest swamp in Wayne County; averaged 4 per dip. (Rings, Lyon). MICHIGAN - *Aedes* sp. still present in larval stage April 13, following week of cool nights in Shiawassee County. (Dowdy).

CATTLE LICE - UTAH - Rubbing noted in Levan-Scipio area of southern Juab and eastern Millard Counties. (Knowlton). One thousand cattle recently treated in Beaver area, Beaver County. (Knowlton, Esplin). Moderate to severe on some herds in Kane, Juab, Garfield, Sanpete and Sevier Counties; more control practiced in State during recent years. (Knowlton).

SHAFT LOUSE (Menopon gallinae) - OHIO - Moderate on flock of white leghorn layers; appeared over bodies, clinging to feathers rather than skin area. (Lyon).

AMERICAN DOG TICK (Dermacentor variabilis) - DELAWARE - Activity increased noticeably in New Castle County. (Burbutis). MARYLAND - Adult collected on human in St. Marys County. (U. Md., Ent. Dept.). MICHIGAN - Specimen taken from ear of child in Eaton County. (Janes). SOUTH DAKOTA - Collected in Union County on clothing of man. (Hintz).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Moderate to heavy in eastern part of State. (Okla. Coop. Sur.).

BROWN DOG TICK (Rhipicephalus sanguineus) - OKLAHOMA - Caused concern in localized areas around Stillwater, Payne County. (Okla. Coop. Sur.).

EAR TICK (Otobius megnini) - UTAH - Common throughout Beaver County and in Iron County; examination of few animals from any herd shows infestation. (Knowlton, Esplin).

HOUSEHOLD AND STRUCTURAL INSECTS

DERMESTID BEETLES - PENNSYLVANIA - Numerous complaints concerning *Anthrenus scrophulariae* in homes received from Huntingdon County. (Udine, Paules).

COLORADO - *Attagenus* spp. larvae nuisance in and around food cupboards in Larimer and Kiowa County homes. (Hantsbarger).

SPIDER BEETLES - UTAH - Serious in large building in Garfield County near Bryce Canyon National Park. (Knowlton, Lindsay). PENNSYLVANIA - Mezium affine very abundant in attic of home at Scranton, Lackawanna County. (Mulderig, Apr. 11).

ELM LEAF BEETLE (Galerucella xanthomelaena) - DELAWARE - Hibernating adults considerably annoying in New Castle County home. (Bray).

DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae) - WASHINGTON - Adults commonly occurring in homes in Island County; probably brought in with firewood. (Baker, Mar. 27).

COCKROACHES - ARIZONA - Problem in Pinal County during past week. (Ariz. Coop. Sur.). MINNESOTA - Blatta orientalis occurred in several homes in St. Paul-Minneapolis area. (Minn. Ins. Rpt.). PENNSYLVANIA - Numerous requests concerning controls noted in March and April in Allegheny County. (Paules). MARYLAND - B. orientalis infested homes in Baltimore and Montgomery Counties. (U. Md., Ent. Dept.).

ANTS - NEW MEXICO - Winged forms entering homes in large numbers at Las Cruces, Dona Ana County. (N. M. Coop. Rpt.). NORTH CAROLINA - Acanthomyops interjectus winged forms moderate in basement of Wake County home. (Axtell).

CLOVER MITE (Bryobia praetiosa) - CONNECTICUT - A problem in Norwich. (Savos). NEW JERSEY - Active in many areas. (Ins.-Dis. Newsltr., Apr. 16). PENNSYLVANIA - Numerous in homes in Allegheny County (Apr. 5), Centre County (Apr. 16) and Blair County (Apr. 18). (Udine). DELAWARE - Reports of annoyance to homeowners continue numerous in New Castle County. (Burbutis). MARYLAND - Annoying in College Park home, Prince Georges County. (U. Md., Ent. Dept.). OHIO - Heavy in home in Dalton, Wayne County. (Rings). COLORADO - Continues prevalent household problem in many areas of State. (Hantsbarger). UTAH - Invaded number of homes in Manti-Ephraim area, Sanpete County, and Richfield and nearby areas of Sevier County. (Knowlton).

TERMITES - CONNECTICUT - Swarming of unspecified species troublesome to many homeowners. (Savos). NEW JERSEY - Swarming of unspecified species continues of primary concern to homeowners. (Ins.-Dis. Newsltr., Apr. 16). MARYLAND - Reticulitermes spp. noted swarming in homes at Hyattsville, Prince Georges County, and at Baltimore. (U. Md., Ent. Dept.). OKLAHOMA - Reticulitermes sp. noted swarming in Lawton, Comanche County, and Stillwater, Payne County. (Okla. Coop. Sur.). TEXAS - Alates of undetermined subterranean species swarming in several areas of State; many specimens submitted. (Newton).

CARPENTER ANTS (Camponotus spp.) - DELAWARE - Several heavy flights reported. (Burbutis). MARYLAND - Winged forms of C. pennsylvanicus noted out-of-doors in Rockville, Montgomery County. (U. Md., Ent. Dept.). WASHINGTON - Winged adults in homes in Island County. (Baker, Mar. 25).

CARPENTER BEE (Xylocopa virginica) - MARYLAND - Adults noted in and around buildings in Montgomery and Prince Georges Counties. (U. Md., Ent. Dept.).

A POWDER-POST BEETLE - TEXAS - Unspecified species virtually destroyed baseboards in Wise County home. (Turney).

STORED-PRODUCTS INSECTS

GRANARY WEEVIL (Sitophilus granarius) - OHIO - Most common pest of grain brought to a Preble County grain elevator from local farmers; farm-stored grains a major source of infestations. (Lyon).

BENEFICIAL INSECTS

FLOWER FLIES - FLORIDA - Microdon aurulentus collected in Steiner trap in calamondin tree at Fort Ogden, De Soto County, April 4, by R. H. Rhodes. This is first record for State. (Fla. Coop. Sur.). OKLAHOMA - Larvae of unspecified species attacking aphids on ornamentals in Stillwater area, Payne County. (Okla. Coop. Sur.). OHIO - Averaged one larva per 2 apple tree buds at orchard in Wayne County; some larvae noted attacking aphids. Species not specified. (Forsythe, Apr. 11). MICHIGAN - Eggs of undetermined species common around aphid nymphs on apple and cherry trees near Lansing, Ingham County. (Dowdy). CONNECTICUT - Unspecified species present on unfolding leaves; with aphid populations at low level, predation can add significantly to control. (Savos).

LADY BEETLES - ARIZONA - Rodolia cardinalis found feeding on cottony-cushion scale (Icerya purchasi) in citrus groves in East Mesa area, Maricopa County. Attempts to move larvae to other infested areas of State to be made later. (Ariz. Coop. Sur.). NEW MEXICO - Unspecified species abundant in barley fields infested with corn leaf aphid (Rhopalosiphum maidis) near Hatch, Dona Ana County.. (N. M. Coop. Rpt.). WYOMING - Adults of several species appearing in alfalfa and small grain in Fremont, Park and Washakie Counties. (Fullerton). OKLAHOMA - Larvae and adults of several species light to heavy in most field crops and on ornamentals throughout State. Ranged 4-15 per 10 sweeps in southeast; averaged 20 per 10 sweeps in south central; and ranged 6-23 per 10 sweeps in southwest. (Okla. Coop. Sur.). ILLINOIS - Adults of unspecified species ranged 0-30 (average 7.3) and larvae ranged 0-10 (average 0.5) per 100 sweeps in clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.). WISCONSIN - Hippodamia tredecimpunctata adults relatively common in rye fields in Trempealeau County. (Wis. Ins. Sur.). CONNECTICUT - Unspecified species migrating from hibernation quarters in large numbers. (Savos).

GREEN LACEWINGS (Chrysopa spp.) - OKLAHOMA - Light to heavy (1-20 per 10 sweeps) in alfalfa in southeast, south central and southwestern areas; also present in wheat fields. (Okla. Coop. Sur.). ILLINOIS - C. oculata adults averaged 0.4 per 100 sweeps in clover and alfalfa in west, west-southwest and central districts. (Ill. Ins. Rpt.). WISCONSIN - Adults, probably C. oculata, present in field of rye in Spring Green area, Iowa County. (Wis. Ins. Sur.).

DAMSEL BUGS (Nabis spp.) - ILLINOIS - Adults ranged 0-40 (average 5.3) per 100 sweeps in clover and alfalfa in the west, west-southwest and central districts. (Ill. Ins. Rpt.).

AN ANDRENID BEE (Andrena sp.) - MICHIGAN - Active on early flowers around Lansing, Ingham County. (Fischer).

MISCELLANEOUS INSECTS

WHITE-FRINGED BEETLES (Graphoganthus spp.) - Larval surveys in LOUISIANA indicate small acreages of new infestations in Jefferson, St. John the Baptist and Plaquemines Parishes. All treatment in Loretto, Lawrence County, TENNESSEE, completed. Larval surveys in Autauga, Elmore, Macon and Montgomery Counties, ALABAMA, negative. Small acreages treated in several GEORGIA counties. Treatment completed on all known infested acreage in Darlington County, SOUTH CAROLINA. Several small areas treated in NORTH CAROLINA counties. (PPC, South. Reg., Mar. Rpt.).

JAPANESE BEETLE (Popillia japonica) - ILLINOIS - Ground treatment completed on 400 acres in East St. Louis area on March 15. (PPC, Cent. Reg.). OHIO - Grubs moderate to heavy at airport and cemetery in Cuyahoga and Stark Counties, respectively; 25-30 grubs per square foot with one-third in third instar. (Moore, Custer, Holmes, Apr. 9).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - CALIFORNIA - Larvae and pupae locally heavy in soil around grindelia plants in Modesto, Stanislaus County. (Cal. Coop. Rpt.).

SUGARCANE BEETLE (Euetheola rugiceps) - ALABAMA - Two specimens taken at night light in Lee County. (McQueen).

A WATER SCAVENGER BEETLE (Hydrous triangularis) - NEBRASKA - Adult activity heavy at night in Lincoln, Lancaster County, and Omaha, Douglas County. (Bergman).

A LEAFHOPPER (Empoasca filamenta) - WASHINGTON - Overwintering adults active on weeds at Waitsburg, Walla Walla County, March 19. (Landis).

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Seven new, extremely light infestations found in Sacramento, Sacramento County. Weather interfered with treatment schedule; however, also slowed pupal development. Emergence seems imminent. (Cal. Coop. Rpt.).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - Collected for the first time in Sabine County, TEXAS. Surveys in Pulaski, Crittenden, Clay and Greene Counties, ARKANSAS, negative. Extensions of known infestations found in both north and south LOUISIANA; appraisal surveys in some treated blocks good in most areas. Found for the first time in Jefferson County, MISSISSIPPI. Aerial treatments made in Hinds and Washington Counties, and negative surveys made on treated blocks in Jefferson Davis and Wilkinson Counties. All surveys in TENNESSEE negative. In NORTH and SOUTH CAROLINA, extensions to infestations found in nearly all areas surveyed. Treatment of right-of-way of Interstate Highway 10 in Baker County, FLORIDA, completed; area involved 150 acres. (PPC, South. Reg., Mar. Rpt.).

A UROPODID MITE (Fuscuropoda agitans) - CALIFORNIA - Medium in earthworm beds in Kingsburg, Fresno County. (Cal. Coop. Rpt.).

CORRECTIONS

CEIR 13(13):287 - ANTS - SOUTH DAKOTA - Formica sp., should read LARGER YELLOW ANT (Acanthomyops interjectus); det. by M. R. Smith.

CEIR 13(15):368 - A SPIDER BEETLE (Mezium americanum) - NORTH DAKOTA - Additional specimen found in student's collection made May 17, 1939, indicates an earlier but previously unreported new State record. Make necessary correction under DETECTION, page 357.

ADDITIONAL NOTES

ARKANSAS - PEA APHID (Acyrtosiphon pisum) increased in northwest; now heavy statewide. Winged forms quite common. In many instances, infestations continue so heavy only estimates of numbers can be made; more than 100 collected in one sweep of 15-inch net. Low numbers of CORN EARWORM (Heliothis zea) adults being taken in light traps at Hope and Fayetteville. First moth of season taken at Kelso March 27. EASTERN TENT CATERPILLAR (Malacosoma americanum) infestations present statewide. Nests increasing in size. Reported heavy in Franklin, Crawford and Sebastian Counties (west central); wild cherry principal host. Heavy winter mortality of LOCUST BORER (Megacyllene robiniae) reported in Little Rock area. SCALE INSECTS on pecan increasing in Stuttgart area. (Ark. Ins. Sur.).

GEORGIA - LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) heavy on crimson clover in Oconee County. (Coleman).

MINNESOTA - Recently completed surveys indicate EUROPEAN CORN BORER (Ostrinia nubilalis) overwintering mortality averaged 17 percent, compared with 16 percent for 1962. Apparently extremely cold weather and light snow cover had little effect on overwintering population. Observations of GRASSHOPPER egg pods in southwestern counties showed no development, except on protected sites where some early coagulation of Melanoplus sanguinipes eggs found. CLUSTER FLY (Pollenia rudis) infested home in Minneapolis. BLACK CARPET BEETLE (Attagenus piceus) identified from home in St. Paul. (Minn. Ins. Rpt.).

VIRGINIA - Fall treatment for ALFALFA WEEVIL (Hypera postica) not completely effective in many areas this year. Control not achieved in some experimental plots at Virginia Agricultural Experiment Station. Larvae averaged 46 per square foot in fall-treated field in Culpeper County. (Hutcheson, Apr. 11). Larvae moderate in 2 fields treated in October 1962 in Pittsylvania County. (Dominick). Larvae ranged 10-26 per sweep in Campbell and Appomattox Counties; very few adults taken. Few eggs found in stems. All fields treated. (Woodside). One adult and no larvae taken in 300 sweeps in untreated field with poor stand of alfalfa near Staunton, Augusta County. None found in 300 sweeps in untreated and treated fields in vicinity of Steeles Tavern, Augusta and Rockbridge Counties; few eggs found in stems in untreated fields. (Woodside). None found in Floyd County; infestations severe in Franklin and Patrick Counties. (Rowell). Larvae and adults present in all fields checked; very light to medium in Montgomery, Amherst, Appomattox, Buckingham and Amelia Counties; medium to severe, mostly severe (several hundred to several thousand larvae per 100 sweeps), in Goochland, Powhatan, Prince Edward, Nottoway, Campbell, Charlotte, Lunenburg, Mecklenburg and Halifax Counties. (Tarpley). PEA APHID (Acyrtosiphon pisum) moderately severe, with damage evident in fall-seeded alfalfa stand in Pittsylvania County (Dominick); ranged 5-40 per sweep in alfalfa in Campbell County and 10-30 per sweep in Appomattox County. (Woodside). Severe in fields checked in Franklin, Henry and Patrick Counties; light in Floyd County. (Rowell). Light to medium in Montgomery, Amherst, Goochland, Powhatan, Appomattox, Cumberland and Lunenburg Counties; medium to severe, mostly severe, in Nottoway, Amelia, Campbell, Charlotte, Mecklenburg and Halifax Counties. Winged forms present in all fields. Only occasional aphid killed by fungus. These severe infestations adversely affecting alfalfa growth. Predators common in all fields checked; included adults and larvae of LADY BEETLES and larvae of NABIDS and FLOWER FLIES. (Tarpley). Tents of EASTERN TENT CATERPILLAR (Malacosoma americanum) conspicuous in all counties surveyed. (Tarpley). JUNIPER WEBWORM (Dichomerus marginella) damage heavy on several plants in small Pittsylvania County nursery. (Dominick, Apr. 11).

Weather of the week ending April 22 (continued from page 424)

the northern Great Plains. Four inches fell at Ely, Nevada, and 18 inches at Lander, Wyoming. Snow in the Black Hills accumulated to 9 inches. On Monday, the 22d, a storm had moved from the Rocky Mountain region over the midcontinent area where numerous severe, local storms occurred and strong winds whipped up dust over Missouri, Iowa, and other portions of the mid-Mississippi and Ohio Valley regions. Temperatures averaged above normal over the central and eastern United States. Departures exceeded +5° over most of the area. The greatest departures were over an area extending from Abilene, Texas, through Oklahoma, the southern portions of Missouri, Illinois, and Indiana, to Lexington, Kentucky. Temperatures at Tulsa, Oklahoma, averaged 16° above normal. In contrast to the warm central and eastern portions of the Nation, the northern Great Plains were unseasonably cool. Negative departures, largest over the Great Basin, were as much as 15° at Ely, Nevada, and in central Oregon. Freezing temperatures during the week occurred as far south as North Carolina, Wisconsin, Iowa, and the southern Rocky Mountains. Precipitation exceeded 1.00 inch along the northern Pacific coast, over western Pennsylvania, northern Ohio, northern Illinois, eastern Iowa and a few scattered stations elsewhere. Rainfall ranged from 0.50 to 1.00 inch over Washington, Oregon, the higher elevations of California, portions of the northern High Plains, and from Missouri to New England. Elsewhere, precipitation was generally less than 0.50 inch. Most of the south Atlantic and Gulf coasts, the southern High Plains, and the southern Rocky Mountains received no rain. (Summary supplied by U. S. Weather Bureau).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. ips.	Feltia subterr.	Perid. saucia	Prod. ornith.	Spodop. exigua	Heliothis zea vires.
ARKANSAS							
Hope 4/10-17	2	8		2			3
Fayetteville 4/17	1	3		1			2
FLORIDA							
Gainesville 4/15		1	1				
GEORGIA							
Tifton 4/11-17							16 2
ILLINOIS (County)							
Champaign 4/12-18	50	10		4			
KANSAS							
Garden City 4/12,15	36			13	2		
Manhattan 4/16-17	2						
Mound Valley 4/12	2						
Wathena 4/15	5			8			
MISSISSIPPI							
*Stoneville 4/12-18	326	38	9	38	9		7 2
MISSOURI							
Portageville 4/4-10, 11-17	11			1			
NEBRASKA							
North Platte 4/13-17	65	45		12			
SOUTH CAROLINA							
Charleston 4/8-14	7	1	2		2		4
Charleston 4/15-21	10	7	1		2		8
TENNESSEE (Counties)							
Maury 4/9-15	5	2					
Robertson 4/9-15	4	1			4		
Cumberland 4/9-15	1				1		
Greene 4/9-15	3						
Blount 4/9-15	4	7			5		
TEXAS							
Waco 4/13-19	69	15	25	46	3	7	
*Brownsville 4/13-17	8	38	2,654	117			608 1
WISCONSIN							
Middleton 4/3-18	33	9		2			
Madison 4/2-18	58	3		1			

Additional Light Trap Collections

TEXAS, *Brownsville (4/13-17) - Loxostege similalis - 12,456.

* Six traps - Brownsville; 2 traps - Stoneville.

ESTIMATED LOSSES AND PRODUCTION COSTS ATTRIBUTED TO INSECTS AND RELATED ARTHROPODS

ATTACKING	<u>Alfalfa</u> (Commodity)	IN	<u>Wyoming</u> (State or District)	DURING	<u>1962</u> (Year)
A. Pest or pest complex <u>Grasshoppers, leafhoppers, army cutworm, plant bugs, alfalfa weevil, alfalfa looper, lygus bugs, pea aphid</u>					
B.	Number of <u>acres</u> ^a produced (From CRS)	No.	<u>468,342</u>		
C.	Average yield per <u>acre</u> ^a (From CRS)	Units/	<u>2 ton</u>		
D.	Price ^b per unit (<u>ton</u>) ^c (From CRS)	\$/	<u>18.00</u>		
E.	<u>Acres</u> ^a needing control	No.	<u>412,200</u>		
F.	<u>Acres</u> ^a treated	No.	<u>257,700</u>		
G. Reduction due to not treating where needed:					
H.	Loss in yield, percent	%	<u>13.5</u>		
I.	Loss in yield, units per <u>acre</u> ^a , C x H	Units/	<u>.27 ton</u>		
J.	Loss in yield, \$ per <u>acre</u> ^a , D x I	\$/	<u>4.86</u>		
K.	Loss in quality, \$ per <u> </u> ^a	\$/	<u> </u>		
L.	Yield loss for all <u>acres</u> ^a , (E-F) x I	Units	<u>41,715 ton</u>		
M.	Control cost, \$ per <u>acre</u> ^a	\$/	<u>4.00</u>		
N.	Control cost for all <u>acres</u> ^a , F x M	\$	<u>1,030,800</u>		
O.	Yield loss for all <u>acres</u> ^a , (E-F) x J	\$	<u>750,870</u>		
P.	Quality loss for all <u> </u> ^a , (E-F) x K	\$	<u> </u>		
Q.	Combined control cost and losses, N + O + P	\$	<u>1,781,670</u>		

Comment: _____

- a. Acres, head of cattle or other producing units used by Crop Reporting Service.
- b. Season average price per unit as given by CRS (describe basis).
- c. Bushels, boxes, tons or other marketing units used by CRS; show which in ().

Submitted by _____ Dale Fullerton

Date 12-21-62

ESTIMATED LOSSES AND PRODUCTION COSTS ATTRIBUTED TO INSECTS AND RELATED ARTHROPODS

ATTACKING Alfalfa seed IN Wyoming DURING 1962
(Commodity) (State or District) (Year)

A. Pest or pest complex Alfalfa weevil, lygus bugs, pea aphid, army cutworm, alfalfa plant bug, grasshoppers

B. Number of acres^a produced (From CRS) No. 4,910

C. Average yield per acre^a (From CRS) Units/ 2 cwt.

D. Price^b per unit (cwt.)^c (From CRS) \$/ 44.00

E. Acres^a needing control No. 4,910

F. Acres^a treated No. 4,000

G. Reduction due to not treating where needed:

H. Loss in yield, percent % 20.0

I. Loss in yield, units per acre^a, C x H Units/ .4 cwt.

J. Loss in yield, \$ per acre^a, D x I \$/ 1.76

K. Loss in quality, \$ per acre^a \$/

L. Yield loss for all acres^a, (E-F) x I Units 364 cwt.

M. Control cost, \$ per acre^a \$/ 7.00

N. Control cost for all acres^a, F x M \$ 28,000

O. Yield loss for all acres^a, (E-F) x J \$ 7,000

P. Quality loss for all acres^a, (E-F) x K \$

Q. Combined control cost and losses, N + O + P \$ 35,000

Comment:

- a. Acres, head of cattle or other producing units used by Crop Reporting Service.
- b. Season average price per unit as given by CRS (describe basis).
- c. Bushels, boxes, tons or other marketing units used by CRS; show which in ().

Submitted by Dale Fullerton

Date 12-21-62

ESTIMATED LOSSES AND PRODUCTION COSTS ATTRIBUTED TO INSECTS AND RELATED ARTHROPODS

ATTACKING	<u>Corn (Grain)</u> (Commodity)	IN	<u>Wyoming</u> (State or District)	DURING	<u>1962</u> (Year)
A. Pest or pest complex <u>Southern and western corn rootworms, wireworms, two-spotted spider mite, corn leaf aphid, corn earworm</u>					
B.	Number of <u>acres</u> ^a produced (From CRS)	No.	<u>7,000</u>		
C.	Average yield per <u>acre</u> ^a (From CRS)	Units/	<u>60 bu.</u>		
D.	Price ^b per unit (bu.) ^c (From CRS)	\$/	<u>1.08</u>		
E.	<u>Acres</u> ^a needing control	No.	<u>4,500</u>		
F.	<u>Acres</u> ^a treated	No.	<u>1,400</u>		
G.	Reduction due to not treating where needed:				
H.	Loss in yield, percent	%	<u>5.0</u>		
I.	Loss in yield, units per <u>acre</u> ^a , C x H	Units/	<u>3 bu.</u>		
J.	Loss in yield, \$ per <u>acre</u> ^a , D x I	\$/	<u>3.24</u>		
K.	Loss in quality, \$ per <u> </u> ^a	\$/	<u> </u>		
L.	Yield loss for all <u>acres</u> ^a , (E-F) x I	Units	<u>18,600 bu.</u>		
M.	Control cost, \$ per <u>acre</u> ^a	\$/	<u>3.00</u>		
N.	Control cost for all <u>acres</u> ^a , F x M	\$	<u>4,200</u>		
O.	Yield loss for all <u>acres</u> ^a , (E-F) x J	\$	<u>10,044</u>		
P.	Quality loss for all <u> </u> ^a , (E-F) x K	\$	<u> </u>		
Q.	Combined control cost and losses, N + O + P	\$	<u>14,244</u>		

Comment: _____

- a. Acres, head of cattle or other producing units used by Crop Reporting Service.
- b. Season average price per unit as given by CRS (describe basis).
- c. Bushels, boxes, tons or other marketing units used by CRS; show which in ().

Submitted by Dale Fullerton

Date 12-21-62

ESTIMATED LOSSES AND PRODUCTION COSTS ATTRIBUTED TO INSECTS AND RELATED ARTHROPODS

ATTACKING	Corn (Silage) (Commodity)	IN	Wyoming (State or District)	DURING	1962 (Year)
A. Pest or pest complex	Southern and western corn rootworms, wireworms, two-spotted spider mite, corn leaf aphid, corn earworm				
B. Number of	acres ^a	produced (From CRS)	No.	62,250	
C. Average yield per	acre ^a	(From CRS)	Units/	12 ton	
D. Price ^b per unit (ton) ^c		(From CRS)	\$/	7.00	
E. Acres ^a	needing control		No.	33,700	
F. Acres ^a	treated		No.	10,100	
G. Reduction due to not treating where needed:					
H. Loss in yield, percent			%	5.0	
I. Loss in yield, units per	acre ^a	C x H	Units/	.6 ton	
J. Loss in yield, \$ per	acre ^a	D x I	\$/	4.2	
K. Loss in quality, \$ per	acre ^a		\$/		
L. Yield loss for all	acres ^a	(E-F) x I	Units	14,160 ton	
M. Control cost, \$ per	acre ^a		\$/	3.00	
N. Control cost for all	acres ^a	F x M	\$	30,300	
O. Yield loss for all	acres ^a	(E-F) x J	\$	99,120	
P. Quality loss for all	acre ^a	(E-F) x K	\$		
Q. Combined control cost and losses, N + O + P			\$	129,420	

Comment: _____

- a. Acres, head of cattle or other producing units used by Crop Reporting Service.
 b. Season average price per unit as given by CRS (describe basis).
 c. Bushels, boxes, tons or other marketing units used by CRS; show which in ().

Submitted by _____ Dale Fullerton
 Date 12-21-62 _____

ESTIMATED LOSSES AND PRODUCTION COSTS ATTRIBUTED TO INSECTS AND RELATED ARTHROPODS

ATTACKING Sugar beets IN Wyoming DURING 1962
(Commodity) (State or District) (Year)

A. Pest or pest complex Beet webworm, sugar-beet root maggot, beet leafhopper, striped flea beetle

B. Number of acres^a produced (From CRS) No. 50,380

C. Average yield per acre^a (From CRS) Units/ 14 ton

D. Price^b per unit (ton)^c (From CRS) \$/ 17.00

E. Acres^a needing control No. 43,770

F. Acres^a treated No. 38,070

G. Reduction due to not treating where needed:

H. Loss in yield, percent % 12.00

I. Loss in yield, units per acre^a, C x H Units/ 1.68 ton

J. Loss in yield, \$ per acre^a, D x I \$/ 28.60

K. Loss in quality, \$ per acre^a \$/

L. Yield loss for all acres^a, (E-F) x I Units 5,700 ton

M. Control cost, \$ per acre^a \$/ 5.00

N. Control cost for all acres^a, F x M \$ 190,350

O. Yield loss for all acres^a, (E-F) x J \$ 163,020

P. Quality loss for all acres^a, (E-F) x K \$

Q. Combined control cost and losses, N + O + P \$ 353,370

Comment: _____

- a. Acres, head of cattle or other producing units used by Crop Reporting Service.
- b. Season average price per unit as given by CRS (describe basis).
- c. Bushels, boxes, tons or other marketing units used by CRS; show which in ().

Submitted by _____ Dale Fullerton

Date 12-21-62

ESTIMATED LOSSES AND PRODUCTION COSTS ATTRIBUTED TO INSECTS AND RELATED ARTHROPODS

ATTACKING	Beans (Commodity)	IN	Wyoming (State or District)	DURING	1962 (Year)
A.	Pest or pest complex	Flea beetles, Mexican bean beetle, lygus bugs, grasshoppers			
B.	Number of acres ^a produced (From CRS)	No.	76,400		
C.	Average yield per acre ^a (From CRS)	Units/	20 cwt.		
D.	Price ^b per unit (cwt.) ^c (From CRS)	\$/	6.10		
E.	Acres ^a needing control	No.	34,600		
F.	Acres ^a treated	No.	23,900		
G.	Reduction due to not treating where needed:				
H.	Loss in yield, percent	%	8.0		
I.	Loss in yield, units per acre ^a , C x H	Units/	1.6 cwt.		
J.	Loss in yield, \$ per acre ^a , D x I	\$/	9.76		
K.	Loss in quality, \$ per ^a	\$/			
L.	Yield loss for all acres ^a , (E-F) x I	Units	17,120 cwt.		
M.	Control cost, \$ per acre ^a	\$/	3.00		
N.	Control cost for all acres ^a , F x M	\$	71,700		
O.	Yield loss for all acres ^a , (E-F) x J	\$	104,432		
P.	Quality loss for all ^a , (E-F) x K	\$			
Q.	Combined control cost and losses, N + O + P	\$	176,132		

Comment: _____

- a. Acres, head of cattle or other producing units used by Crop Reporting Service.
- b. Season average price per unit as given by CRS (describe basis).
- c. Bushels, boxes, tons or other marketing units used by CRS; show which in ().

Submitted by _____ Dale Fullerton

Date 12-21-62 _____

ESTIMATED LOSSES AND PRODUCTION COSTS ATTRIBUTED TO INSECTS AND RELATED ARTHROPODS

ATTACKING Potatoes IN Wyoming DURING 1962
(Commodity) (State or District) (Year)

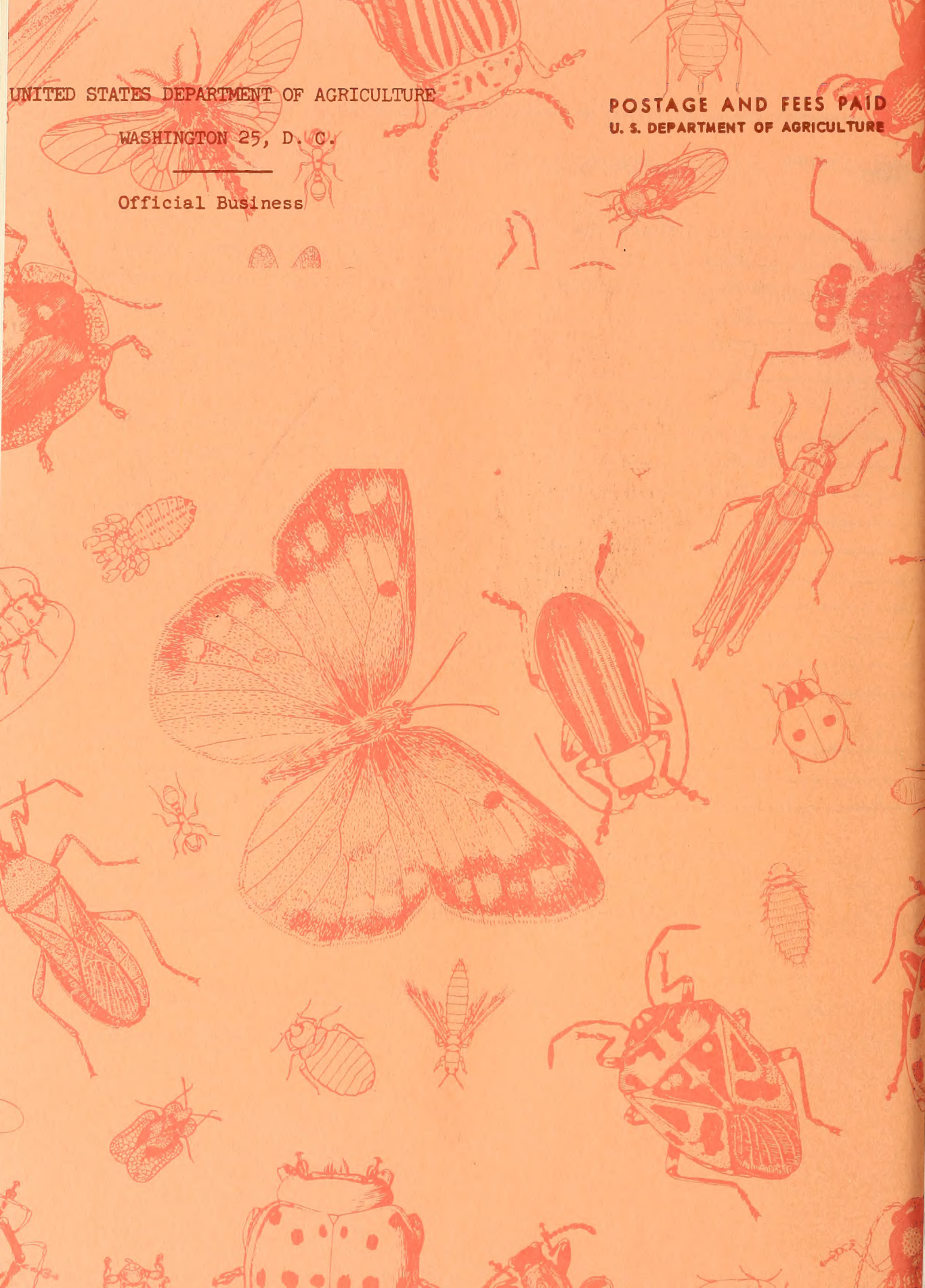
A. Pest or pest complex	Potato psyllid, Colorado potato beetle, flea beetles, leafhoppers, grasshoppers	
B. Number of <u>acres</u> ^a produced (From CRS)	No.	4,625
C. Average yield per <u>acre</u> ^a (From CRS)	Units/	300 cwt.
D. Price ^b per unit (<u>cwt.</u>) ^c (From CRS)	\$/	1.25
E. <u>Acres</u> ^a needing control	No.	4,500
F. <u>Acres</u> ^a treated	No.	3,000
G. Reduction due to not treating where needed:		
H. Loss in yield, percent	%	10.0
I. Loss in yield, units per <u>acre</u> ^a , C x H	Units/	30 cwt.
J. Loss in yield, \$ per <u>acre</u> ^a , D x I	\$/	37.50
K. Loss in quality, \$ per <u>acre</u> ^a	\$/	
L. Yield loss for all <u>acres</u> ^a , (E-F) x I	Units	45,000 cwt.
M. Control cost, \$ per <u>acre</u> ^a	\$/	5.00
N. Control cost for all <u>acres</u> ^a , F x M	\$	15,000
O. Yield loss for all <u>acres</u> ^a , (E-F) x J	\$	56,250
P. Quality loss for all <u>acres</u> ^a , (E-F) x K	\$	
Q. Combined control cost and losses, N + O + P	\$	71,250

Comment: _____

- a. Acres, head of cattle or other producing units used by Crop Reporting Service.
b. Season average price per unit as given by CRS (describe basis).
c. Bushels, boxes, tons or other marketing units used by CRS; show which in ().

Submitted by Dale Fullerton

Date 12-21-62



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